

I. Amendments to the Claims

Please amend the claims as follows with the following version of the claims in accordance with revised 37 CFR § 1.121.

1. (Currently Amended) A method for management of a distributed data processing system, the method comprising:

representing the distributed data processing system as a set of scopes, wherein a scope comprises a logical organization of network-related objects;

monitoring resources within the distributed data processing system using a set of distributed monitor controllers, wherein each distributed monitor controller is uniquely responsible for monitoring resources within different scopes;

~~wherein a first distributed monitor controller is responsible for monitoring a set of resources;~~

in response to monitoring a the set of resources, generating topology information associated with the set of resources by a first instance of a distributed monitor controller in the set of distributed monitor controllers;

in response to detecting a potential failure of the first instance of the first distributed monitor controller, starting a second instance of the distributed monitor controller;

in response to monitoring the set of resources, generating topology information associated with the set of resources by the second instance of the distributed monitor controller; and

in response to a determination that generated topology information indicates assignment of overlapping scopes between the first instance of the distributed monitor controller and the second instance of the distributed monitor controller, determining a failure of the first instance of the distributed monitor controller based on a communication test and

~~in response to detecting the failure of the first distributed monitor controller, updating the topology information associated with the set of resources.~~

2. (Currently Amended) The method of claim 1 further comprising:
attempting the communication test with the first instance of the distributed monitor controller;
in response to detecting a communication failure with the first instance of the distributed
monitor controller, determining that the first instance of the distributed monitor controller is inactive;
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in response to detecting a communication success with the first instance of the distributed
monitor controller, determining that the first instance of the distributed monitor controller is active.
~~starting a second distributed monitor controller, wherein the first distributed monitor controller~~
~~and the second distributed monitor controller are similarly configured.~~
- 10 3. (Currently Amended) The method of claim 2 further comprising:
in response to a determination that the first instance of the distributed monitor controller is
active, requesting a the shutdown of the second instance of the distributed monitor controller.
- 15 4. (Currently Amended) The method of claim 3 further comprising:
updating the topology information that was generated by the second instance of the
distributed monitor controller.
~~receiving a request from the second distributed monitor controller to establish an input/output~~
~~connection; and~~
20 ~~determining that the first distributed monitor controller has an active input/output connection.~~
5. (Currently Amended) The method of claim 2 further comprising:
in response to a determination that the first instance of the distributed monitor controller is
inactive, updating the topology information that was generated by the first instance of the distributed
25 monitor controller.
~~Establishing an input/output connection for the second distributed monitor controller.~~
6. (Currently Amended) The method of claim 1 further comprising:
attempting the communication test with an object request broker (ORB) that supports the first
30 instance of the distributed monitor controller;
in response to detecting a communication failure with the ORB that supports the first instance
of the distributed monitor controller, determining that the first instance of the distributed monitor
controller is inactive; and
requesting a shutdown of the first instance of the distributed monitor controller.
35 ~~receiving a request from the second distributed monitor controller to establish an input/output~~
~~connection;~~

determining that the first distributed monitor controller does not respond to communication on its input/output connection; and
terminating the input/output connection of the first distributed monitor controller.

7. (Currently Amended) The method of claim 5 2 further comprising:
discovering a status associated with each resource in the set of resources via the second distributed monitor controller; and

rewriting topology information associated with each resource in the set of resources in
accordance with the discovered status associated with each resource in the set of resources.

8.

(Currently Amended) The method of claim 5 2-further comprising:

resynchronizing a resource status database with the topology information using the second distributed monitor controller.

9. (Original) The method of claim 8 further comprising:

determining a portion of the resource status database that is necessary for resynchronizing the topology information; and

retrieving only the determined portion of the resource status database.

10. (Currently Amended) A method for management of a distributed data processing system using a network management framework comprised of network management framework components, the method comprising:

representing the distributed data processing system as a set of scopes, wherein a scope comprises a logical organization of network-related objects, and wherein each network management framework component is uniquely assigned resources within different scopes;

receiving a resource request from a first network management framework component;

in response to receiving the resource request from the first network management framework component, determining whether the first network management framework component is a duplicate of a second network management framework component based on whether the first network management framework component and the second network management framework component have been assigned overlapping scopes; and

in response to a determination that the first network management framework component is not a duplicate of a second network management framework component, granting access for a resource identified by the resource request to the first network management framework component.

11. (Currently Amended) The method of claim 10 further comprising:

in response to a determination that the first network management framework component is a duplicate of a second network management framework component, resynchronizing a topology

information database using topology information from the second network management framework component.

~~detecting a potential failure of the second network management framework component; and~~

~~in response to detecting the potential failure of the second network management framework component, activating the first network management framework component, wherein the first network management framework component is similarly configured to the second network management framework component.~~

12. (Original) The method of claim 10 further comprising:

in response to a determination that the first network management framework component is a duplicate of a second network management framework component, denying access for a resource identified by the resource request to the first network management framework component.

13. (Currently Amended) The method of claim 10 further comprising:

in response to a determination that the first network management framework component is a duplicate of a second network management framework component, determining whether the second network management framework component is active by performing a communication test; and

in response to a determination that that the second network management framework component is active, terminating the first network management framework component.

14. (Currently Amended) An apparatus for management of a distributed data processing system, the apparatus comprising:

means for representing the distributed data processing system as a set of scopes, wherein a scope comprises a logical organization of network-related objects;

means for monitoring resources within the distributed data processing system using a set of distributed monitor controllers, wherein each distributed monitor controller is uniquely responsible for monitoring resources within different scopes;

~~wherein a first distributed monitor controller is responsible for monitoring a set of resources;~~

means for generating topology information associated with a the set of resources by a first instance of a distributed monitor controller in the set of distributed monitor controllers in response to monitoring the set of resources;

means for starting a second instance of the distributed monitor controller in response to

~~means for detecting a potential failure of the first instance of the distributed monitor controller;~~

means for generating topology information associated with the set of resources by the second instance of the distributed monitor controller in response to monitoring the set of resources;
and

means for determining a failure of the first instance of the distributed monitor controller based on a communication test in response to a determination that generated topology information indicates assignment of overlapping scopes between the first instance of the distributed monitor controller and the second instance of the distributed monitor controller.

; and

means for updating the topology information associated with the set of resources in response to detecting the failure of the first distributed monitor controller.

15. (Currently Amended) The apparatus of claim 14 further comprising:

means for attempting the communication test with the first instance of the distributed monitor controller;

means for determining that the first instance of the distributed monitor controller is inactive in response to detecting a communication failure with the first instance of the distributed monitor controller; and

means for determining that the first instance of the distributed monitor controller is active in response to detecting a communication success with the first instance of the distributed monitor controller.

means for starting a second distributed monitor controller, wherein the first distributed monitor controller and the second distributed monitor controller are similarly configured.

16. (Currently Amended) The apparatus of claim 15 further comprising:

means for requesting a shutdown of the second instance of the distributed monitor controller in response to a determination that the first instance of the distributed monitor controller is active.

17. (Currently Amended) The apparatus of claim 16 further comprising:

means for updating the topology information that was generated by the second instance of the distributed monitor controller.

means for receiving a request from the second distributed monitor controller to establish an input/output connection; and

means for determining that the first distributed monitor controller has an active input/output connection.

18. (Currently Amended) The apparatus of claim 15 further comprising:

means for updating the topology information that was generated by the first instance of the distributed monitor controller establishing an input/output connection for the second distributed monitor controller in response to a determination that that the first instance of the distributed monitor controller is inactive.

19. (Currently Amended) The apparatus of claim ~~14~~ further comprising:

mean for attempting the communication test with an object request broker (ORB) that supports the first instance of the distributed monitor controller; and
means for determining that the first instance of the distributed monitor controller is inactive in response to detecting a communication failure with the ORB that supports the first instance of the distributed monitor controller.

~~means for receiving a request from the second distributed monitor controller to establish an input/output connection;~~

~~means for determining that the first distributed monitor controller does not respond to communication on its input/output connection; and~~

~~means for terminating the input/output connection of the first distributed monitor controller.~~

20. (Currently Amended) The apparatus of claim ~~18~~~~15~~ further comprising:

means for discovering a status associated with each resource in the set of resources via the second distributed monitor controller; and

means for rewriting topology information associated with each resource in the set of resources in accordance with the discovered status associated with each resource in the set of resources.

21. (Currently Amended) The apparatus of claim ~~18~~~~15~~ further comprising:

means for resynchronizing a resource status database with the topology information using the second distributed monitor controller.

22. (Original) The apparatus of claim 21 further comprising:

means for determining a portion of the resource status database that is necessary for resynchronizing the topology information; and

means for retrieving only the determined portion of the resource status database.

23. (Currently Amended) An apparatus for management of a distributed data processing system using a network management framework comprised of network management framework components, the apparatus comprising:

means for representing the distributed data processing system as a set of scopes, wherein a scope comprises a logical organization of network-related objects, and wherein each network management framework component is uniquely assigned resources within different scopes;

means for receiving a resource request from a first network management framework component;

means for determining whether the first network management framework component is a duplicate of a second network management framework component in response to receiving the resource request from the first network management framework component based on whether the first network management framework component and the second network management framework component have been assigned overlapping scopes; and

means for granting access for a resource identified by the resource request to the first network management framework component in response to a determination that the first network management framework component is not a duplicate of a second network management framework component.

24. (Currently Amended) The apparatus of claim 23 further comprising:

means for resynchronizing a topology information database using topology information from the second network management framework component in response to a determination that the first network management framework component is a duplicate of a second network management framework component.

~~means for detecting a potential failure of the second network management framework component; and~~

~~means for activating the first network management framework component in response to detecting the potential failure of the second network management framework component, wherein the first network management framework component is similarly configured to the second network management framework component.~~

25. (Original) The apparatus of claim 23 further comprising:

means for denying access for a resource identified by the resource request to the first network management framework component in response to a determination that the first network management framework component is a duplicate of a second network management framework component.

26. (Currently Amended) The apparatus of claim 23 further comprising:

means for determining whether the second network management framework component is active by performing a communication test in response to a determination that the first network management framework component is a duplicate of a second network management framework component; and

means for terminating the first network management framework component in response to a determination that that the second network management framework component is active.

27. (Currently Amended) A computer program product on a computer readable medium for use in managing a distributed data processing system, the computer program product comprising:

instructions for representing the distributed data processing system as a set of scopes, wherein a scope comprises a logical organization of network-related objects;

instructions for monitoring resources within the distributed data processing system using a set of distributed monitor controllers, wherein each distributed monitor controller is uniquely responsible for monitoring resources within different scopes;

~~wherein a first distributed monitor controller is responsible for monitoring a set of resources;~~

instructions for generating topology information associated with a the set of resources by a first instance of a distributed monitor controller in the set of distributed monitor controllers in response to monitoring the set of resources;

instructions for starting a second instance of the distributed monitor controller in response to detecting a potential failure of the first instance of the distributed monitor controller;

instructions for generating topology information associated with the set of resources by the second instance of the distributed monitor controller in response to monitoring the set of resources;
and

instructions for determining a failure of the first instance of the distributed monitor controller based on a communication test in response to a determination that generated topology information indicates assignment of overlapping scopes between the first instance of the distributed monitor controller and the second instance of the distributed monitor controller.

and

instructions for updating the topology information associated with the set of resources in response to detecting the failure of the first distributed monitor controller.

28. (Currently Amended) The computer program product of claim 27 further comprising:

instructions for attempting the communication test with the first instance of the distributed monitor controller;

instructions for determining that the first instance of the distributed monitor controller is inactive in response to detecting a communication failure with the first instance of the distributed monitor controller; and

instructions for determining that the first instance of the distributed monitor controller is active in response to detecting a communication success with the first instance of the distributed monitor controller.

~~instructions for starting a second distributed monitor controller, wherein the first distributed monitor controller and the second distributed monitor controller are similarly configured.~~

29. (Currently Amended) The computer program product of claim 28 further comprising:
instructions for requesting a the shutdown of the second instance of the distributed monitor controller in response to a determination that ~~that~~ the first instance of the distributed monitor controller is active.

30. (Currently Amended) The computer program product of claim 29 further comprising:
instructions for updating the topology information that was generated by the second instance of the distributed monitor controller

~~instructions for receiving a request from the second distributed monitor controller to establish an input/output connection; and~~
~~instructions for determining that the first distributed monitor controller has an active input/output connection.~~

31. (Currently Amended) The computer program product of claim 28 further comprising:
instructions for updating the topology information that was generated by the first instance of the distributed monitor controller in response to a determination that the first instance of the distributed monitor controller is inactive.

~~instructions for establishing an input/output connection for the second distributed monitor controller in response to a determination that that the first distributed monitor controller is inactive.~~

32. (Currently Amended) The computer program product of claim 31 further comprising:
instructions for attempting the communication test with an object request broker (ORB) that supports the first instance of the distributed monitor controller; and
instructions for determining that the first instance of the distributed monitor controller is inactive in response to detecting a communication failure with the ORB that supports the first instance of the distributed monitor controller.

~~instructions for receiving a request from the second distributed monitor controller to establish an input/output connection;~~

~~instructions for determining that the first distributed monitor controller does not respond to communication on its input/output connection; and~~

~~instructions for terminating the input/output connection of the first distributed monitor controller.~~

33. (Currently Amended) The computer program product of claim 30 ~~28~~ further comprising:
instructions for discovering a status associated with each resource in the set of resources via the second distributed monitor controller; and
instructions for rewriting topology information associated with each resource in the set of resources in accordance with the discovered status associated with each resource in the set of resources.

34. (Currently Amended) The computer program product of claim 30 ~~28~~ further comprising:
instructions for resynchronizing a resource status database with the topology information using the second distributed monitor controller.

35. (Original) The computer program product of claim 34 further comprising:
instructions for determining a portion of the resource status database that is necessary for resynchronizing the topology information; and
instructions for retrieving only the determined portion of the resource status database.

36. (Currently Amended) A computer program product on a computer readable medium for use managing a distributed data processing system using a network management framework comprised of network management framework components, the computer program product comprising:
instructions for representing the distributed data processing system as a set of scopes, wherein a scope comprises a logical organization of network-related objects, and wherein each network management framework component is uniquely assigned resources within different scopes;
instructions for receiving a resource request from a first network management framework component;
instructions for determining whether the first network management framework component is a duplicate of a second network management framework component in response to receiving the resource request from the first network management framework component based on whether the first network management framework component and the second network management framework component have been assigned overlapping scopes; and

instructions for granting access for a resource identified by the resource request to the first network management framework component in response to a determination that the first network management framework component is not a duplicate of a second network management framework component.

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37. (Currently Amended) The computer program product of claim 36 further comprising:
instructions for resynchronizing a topology information database using topology information from the second network management framework component in response to a determination that the first network management framework component is a duplicate of a second network management framework component.

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instructions for detecting a potential failure of the second network management framework component; and

instructions for activating the first network management framework component in response to detecting the potential failure of the second network management framework component, wherein the first network management framework component is similarly configured to the second network management framework component.

38. (Original) The computer program product of claim 36 further comprising:

instructions for denying access for a resource identified by the resource request to the first network management framework component in response to a determination that the first network management framework component is a duplicate of a second network management framework component.

39. (Currently Amended) The computer program product of claim 36 further comprising:

instructions for determining whether the second network management framework component is active by performing a communication test in response to a determination that the first network management framework component is a duplicate of a second network management framework component; and

instructions for terminating the first network management framework component in response to a determination that that the second network management framework component is active.